components, namely ordinary and extraordinary components. These two components are spatially separated to pass through half wave plates 4A and 4B respectively. The half wave plates 4A and 4B are applied to rotate the state of polarization of the beam to mirror position against the optical axis of the plates. The arrangement of the optical axis of the two half wave plates 4A and 4B causes the state of polarization of the o-component and the e-component to have a forty-five degree tilt toward the first quadrant as that shown in Fig. 2A. A Faraday rotator 5A rotates these two beam components to have same state of polarization represented by two horizontal bars in the small circles. The prism 6A corrects the tilt angle of the dual fiber collimator to generate beam components parallel to the walk off crystal. The walk off crystal 7 is employed that serves a special function to maintain the incident optical path without optical-path displacement for beams with a horizontal polarization represented by the horizontal bars. After passing through the walk-off crystal 7, the beam components, as shown in Fig. 3A, are projected through a polarization beam splitter (PBS) 8 maintaining a same optical path. The PBS transmits light with SOP in incident plane to pass through and reflects the light with SOP perpendicular to the plane. The SOP of the light in the optical path of 3 to 4 marked by horizontal bar is perpendicular to the incident plane. In order to transmit the light passing through the PBS, the half wave plate (HWP) 9A which axis is 45-degree orientation is used to rotate the SOP with 90-degree rotation to allow the light to pass through. After the PBS, the HWP 9B changes the SOP back to the original SOP. Then the beam components are projected to a prism 6B to generate a small tilt angle and ready to project to an output port of a dual fiber collimator. The state of polarization of these two beam components when passing through the Faraday rotator 5B are rotated to a negative forty-five degree tilted toward the second quadrant. These states of polarization of these two beam components after passing through the half-wave plates 11A and 11B are rotated to be mutually orthogonal again. These two beam components are recombined through the second birefringent crystal 3B as an output beam for projecting to output port 4 with a small tilt angle to match the small tilt angle of the optical fiber of port two incorporated m a dual fiber collimator.--